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PCT

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Office, PCT
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CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)
30 March 2001 (30.03.01)

International application No.
PCT/NO00/00230

Applicant's or agent's file reference
112370JPH1he

International filing date (day/month/year)
04 July 2000 (04.07.00)

Priority date (day/month/year)
05 July 1999 (05.07.99)

Applicant
HØILI, Jens, Petter

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
02 February 2001 (02.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
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1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Claudio Borton

Telephone No.: (41-22) 338.83.38

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 January 2001 (11.01.2001)

PCT

(10) International Publication Number
WO 01/03078 A1

(51) International Patent Classification⁷: G07F 7/08, 7/10
// H04M 15/00, H04Q 7/38

(21) International Application Number: PCT/NO00/00230

(22) International Filing Date: 4 July 2000 (04.07.2000)

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:
19993332 5 July 1999 (05.07.1999) NO

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

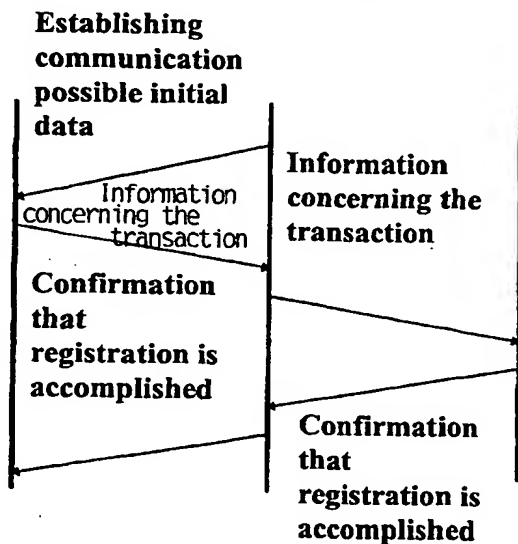
[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PAYMENT TRANSACTION

**PAYMENT
TERMINAL**

**MOBILE
TELEPHONE**

**OPERATOR
SYSTEM**



(Communication
connection)

(Network)

(57) Abstract: The invention relates to a method and a system for performing a payment transaction between a customer's mobile telephone, a sales location's payment terminal and a payment operator's operator system. The transaction is initiated by the mobile telephone. Data concerning the transaction are then transferred from the payment terminal via an electrical or optical communication port to the mobile telephone and from the mobile telephone via a network to the operator system. The operator system registers data concerning the transaction for subsequent charging, invoicing or other settlement. Furthermore, a confirmation of this registration is transmitted back to the mobile telephone and on through the electrical or optical communication port to the payment terminal. The transaction is concluded by an indication being provided that it has been executed and registered.

WO 01/03078 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Method and system for payment transaction

The present invention relates to a method and a system for performing a payment transaction between a customer, a sales location and a payment operator.

5 In business or sales locations, both public and private, including shops, restaurants, hotels and other service industries, etc., payment transactions are normally based on either traditional cash payment, or on the use of payment machines for payment cards. These well-established methods of performing payment transactions require the customer either to be in possession of cash
10 in the form of notes or coins, or he/she must have a payment card in the form of a magnetic or smart card.

It looks as if cash is a means of payment which will be less widely used in the future on account of the substantial costs involved. These costs are due amongst other things to the extensive mechanical routines involved in issuing
15 new coins and notes, as well as resource-demanding and sometimes risky routines for handling, collecting, transporting and storing money in the form of cash.

To-day the use of payment terminals or machines with magnetic cards/smart cards is very widespread and also considered to be a rational payment
20 routine. However, it is encumbered with disadvantages such as cost-demanding production and distribution of cards. A card is usually renewed after two years due to wear. The way in which the payment terminals work is conducive to wear. It is the "read head" for reading the magnetic card which is the weak point here.

25 It is relatively expensive for a business place to use payment terminals. In the first place, the payment terminals have a relatively expensive production cost. Then such terminals are connected to a telecommunication or data network for transfer of data, thereby adding to the costs. Banks and card companies, moreover, charge a high price for their services, which in itself
30 makes the price higher for a consumer. To-day the banks have complete freedom to decide both the price of what a business place must pay in order to possess a payment terminal, and the consumer's fees for the use of the payment card in the machine.

Attempts have also been made earlier to provide new ways of effecting payment transactions, whose object is, amongst other things, to redress the aforementioned problems.

5 WO 98/34203 discloses a method and an apparatus for performing financial transactions using a mobile communication unit. The publication suggests the possibility of using a wireless connection, particularly infrared, between a mobile phone and a cashier register in order to transfer transaction data. All communication steps are performed via a central, financial transaction clearinghouse, which implies that the cashier register must be able to
10 communicate with a telecommunication network.

A previous known solution whose aim is to offer a customer the possibility of carrying out goods or service purchases by means of a mobile telephone, is disclosed in US patent 5.608.778. This publication describes a system where by means of the mobile telephone the customer can obtain credit when
15 making a purchase at a sales location. The customer's mobile telephone is wirelessly connected to a base station. The base station can also communicate with a credit centre, and the credit centre can further communicate with terminal equipment at the sales location. The publication also describes various communication protocols for performing a transaction
20 where the customer obtains credit from the credit centre when purchasing goods or services at the sales location. Fig. 4 of the publication illustrates such a protocol, where a part of the method for the transaction consists in the following steps:

- 25 - the mobile phone transfers data to the terminal equipment at the sales location, which data comprises identification for the mobile telephone, a transaction password and an authorisation, whereupon
- the terminal equipment transfers data to the credit centre, whereupon
- the credit centre transfers a confirmation to the terminal equipment, and finally
- 30 - the terminal equipment transfers the confirmation to the mobile telephone.

The transfer of data from the mobile telephone to the terminal equipment is stated to take place by means of the mobile telephone's radio transfer, the terminal equipment being linked to a receiver with low sensitivity, which can receive radio signals from the mobile telephone.

2A

This known protocol permits goods and services to be purchased at the sales location, where a settlement is subsequently effected between the customer and the credit centre. The credit centre may, for example, be a company associated with the mobile telephone company, thus enabling the settlement
5 for the goods or services to be effected by means of the same account as the account for other use of the mobile telephone.

PATENT CLAIMS

1. A method for performing a payment transaction between a customer, a sales location and a payment operator, where the customer is equipped with a mobile communication unit, where the sales location is equipped with a payment terminal and where the payment operator is equipped with an operator system which is connected to a network which can communicate with the customer's mobile communication unit, which method comprises the following steps:

- a communication connection is established between the mobile communication unit and the payment terminal,
- the payment terminal transfers data comprising information concerning the transaction via the communication connection to the mobile communication unit,
characterized in that
- the mobile communication unit transfers data comprising information concerning the transaction via the network to the operator system, and
- the operator system registers data comprising information concerning the transaction for subsequent charging, invoicing or other settlement, wherein the data which are transferred via the communication connection from the payment terminal to the mobile communication unit and the data which are transferred via the network from the mobile communication unit to the operator system comprise data identifying the sales location and data representing the amount which has to be paid, and wherein the data identifying the sales location are received in advance by the payment terminal, the data having been broadcast through a local radio broadcasting system at the sales location.

2. A method according to claim 1, characterized in that it also comprises the following steps:

- the operator system transfers data comprising a confirmation that the said registration has been accomplished via the network to the mobile communication unit, whereupon the mobile communication unit may provide an indication that data comprising such a confirmation has been received, and
- the mobile communication unit transfers data comprising a confirmation that the said registration has been accomplished via the communication connection to the payment terminal, whereupon the payment terminal may

provide an indication that data comprising such a confirmation has been received.

3. A method according to claims 1-2,
characterized in that the mobile communication unit is a mobile telephone,
5 and that the network is a telecommunication network which includes a
mobile telephone network.

4. A method according to claims 1-3,
characterized in that the communication connection between the mobile
communication unit and the payment terminal is established by an electrical
10 connection through a communication port in the mobile communication unit.

5. A method according to claims 1-3,
characterized in that the communication connection between the mobile
communication unit and the payment terminal is established by an optical
connection, preferably infrared transfer.

15 6. A method according to claim 3,
characterized in that the operator system also fetches information concerning
the payment location by means of services in the mobile telephone network.

7. A system for performing a payment transaction between a customer, a
sales location and a payment operator, comprising a mobile communication
20 unit for the customer, a payment terminal for the sales location and an
operator system connected to a network which can communicate with the
mobile communication unit,
characterized by

- a communication connection between the mobile communication unit and
25 the payment terminal, which comprises an electrical or optical
communication port in the communication unit which is adapted to a
corresponding communication port in the payment terminal, and
- receiver equipment in the payment terminal, arranged for receiving an
identification for the sales location broadcast from a radio transmitter
30 provided locally at or near the sales location, allowing information
comprising said identification to be transferred to the mobile communication
unit via the communication connection.

wherein the data which are transferred via the communication connection from the payment terminal to the mobile communication unit and the data which are transferred via the network from the mobile communication unit to the operator system comprise data identifying the sales location and data
5 representing the amount which has to be paid, and
wherein the data identifying the sales location are received in advance by the payment terminal, the data having been broadcast through a local radio broadcasting system at the sales location.

8. A system according to claim 7,
10 characterized in that the mobile communication unit is a mobile telephone, and that the network comprises a mobile telephone network.

Attempts have also been made earlier to provide new ways of effecting payment transactions, whose object is, amongst other things, to redress the aforementioned problems.

5 A previous known solution whose aim is to offer a customer the possibility of carrying out goods or service purchases by means of a mobile telephone, is disclosed in US patent 5.608.778. This publication describes a system where by means of the mobile telephone the customer can obtain credit when making a purchase at a sales location. The customer's mobile telephone is wirelessly connected to a base station. The base station can also
10 communicate with a credit centre, and the credit centre can further communicate with terminal equipment at the sales location. The publication also describes various communication protocols for performing a transaction where the customer obtains credit from the credit centre when purchasing goods or services at the sales location. Fig. 4 of the publication illustrates
15 such a protocol, where a part of the method for the transaction consists in the following steps:

- the mobile phone transfers data to the terminal equipment at the sales location, which data comprises identification for the mobile telephone, a transaction password and an authorisation, whereupon
20 - the terminal equipment transfers data to the credit centre, whereupon
- the credit centre transfers a confirmation to the terminal equipment, and finally
- the terminal equipment transfers the confirmation to the mobile telephone.

25 The transfer of data from the mobile telephone to the terminal equipment is stated to take place by means of the mobile telephone's radio transfer, the terminal equipment being linked to a receiver with low sensitivity, which can receive radio signals from the mobile telephone.

30 This known protocol permits goods and services to be purchased at the sales location, where a settlement is subsequently effected between the customer and the credit centre. The credit centre may, for example, be a company associated with the mobile telephone company, thus enabling the settlement for the goods or services to be effected by means of the same account as the account for other use of the mobile telephone.

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15 such a protocol, where a part of the method for the transaction consists in the following steps:

- the mobile phone transfers data to the terminal equipment at the sales location, which data comprises identification for the mobile telephone. a transaction password and an authorisation, whereupon
- 20 - the terminal equipment transfers data to the credit centre, whereupon
- the credit centre transfers a confirmation to the terminal equipment. and finally
- the terminal equipment transfers the confirmation to the mobile telephone.

25 The transfer of data from the mobile telephone to the terminal equipment is stated to take place by means of the mobile telephone's radio transfer. the terminal equipment being linked to a receiver with low sensitivity. which can receive radio signals from the mobile telephone.

30 This known protocol permits goods and services to be purchased at the sales location, where a settlement is subsequently effected between the customer and the credit centre. The credit centre may, for example, be a company associated with the mobile telephone company, thus enabling the settlement for the goods or services to be effected by means of the same account as the account for other use of the mobile telephone.

The method and the system disclosed in the publication, however, have some weaknesses, which it is the object of the present invention to redress.

5 A first weakness is that the terminal equipment at the sales location must be in communicative connection with the credit centre, for example by being connected to a telephone or mobile telephone network.

10 A second weakness of the known system is that the local, low-sensitivity radio receiver may tend to be subject to interference from other mobile telephones or other communication devices, and therefore there is a need to provide a more secure and reliable form of communication between the mobile telephone and the terminal equipment.

15 A first object of the present invention is to provide a method for performing a payment transaction as mentioned at the beginning, and which is not encumbered by the above drawbacks. This object is achieved by means of a method as stated in the introductory part of the following claim 1, characterized by the features which are indicated in the characterizing part of the claim.

20 A second object of the present invention is to provide a system for performing a payment transaction as mentioned at the beginning, and which is not encumbered by the above drawbacks. This object is achieved by means of a system as stated in the introductory part of the following claim 9, characterized by the features which are indicated in the characterizing part of the claim.

Further advantages are obtained by means of the features in the dependent claims.

25 The invention will now be described in more detail with reference to the drawings, in which

fig. 1 illustrates a method according to the invention, and

figs. 2a and 2b illustrate a system according to the invention.

30 Figure 1 illustrates which steps are included in an embodiment of a method according to the invention.

A mobile communication unit, which preferably is the customer's mobile telephone, first establishes a communication with a special payment terminal at the sales location. Unlike traditional payment terminals, this payment terminal is not necessarily equipped with means for communication via the telecommunication network, but instead is arranged for local communication with the mobile telephone, which then performs the further communication with the surrounding world.

The communication between the mobile telephone and the payment terminal takes place preferably by placing the mobile telephone in physical, electrical connection with the payment terminal. For this purpose the mobile telephone's built-in communication port is preferably employed. An alternative solution is to employ wireless, but not radio-based transfer, such as, for example, optical transfer, particularly infrared transfer (IrDa). A number of mobile telephones to-day are equipped with means for such infrared communication. A further alternative which still lies within the scope of the invention, but which, if used, redresses the second of the disadvantages of the prior art as mentioned above, is to employ radio-based communication in the same way as in the above-mentioned publication, with a radio receiver provided in the payment terminal. Such radio-based communication between the mobile telephone and the payment terminal may employ different frequencies from the ordinary communication frequency for the mobile telephone, and may, for example, be based on technology according to the Bluetooth specification.

In connection with the establishment of communication connection between the mobile telephone and the payment terminal, initial data may be transferred from the mobile telephone, which, for example, may comprise information which is typed in on the mobile telephone's keyboard. This may comprise an identification or authentication of the customer and/or the sales location.

After establishing the communication connection, if it is equipped with display means, the payment terminal can display the data or parts of the data which are transferred from the mobile telephone, possibly together with information which is contained in the payment terminal concerning the transaction, for example the amount which has to be paid.

When the communication connection between the mobile telephone and the payment terminal has been established, the payment terminal transfers information concerning the transaction via the established communication connection to the mobile telephone. This information will preferably at least
5 comprise the amount covered by the transaction, any other information on what is involved in the transaction, such as number and types of goods and services, and in addition an identification of the sales location. The information may further comprise an identification of the mobile telephone, information concerning its subscription, an associated telephone number or
10 the mobile telephone's owner. The transferred identification of the sales location can be found stored in storage means in the payment terminal, but it can alternatively be read into a keyboard or other input unit on the mobile telephone or on the payment terminal. A further alternative is to have the identification of the sales location broadcast, for example by a radio
15 transmitter provided locally at or near the sales location, so that it can be received by receiver equipment in the payment terminal and subsequently transferred to the mobile telephone. The latter alternative is particularly appropriate if the payment terminal is of a mobile type, which thereby can be moved from one sales location to another, where it is used without any
20 reprogramming or similar modification.

This information is then further transferred to an operator system. This communication takes place through a network comprising the ordinary mobile telephone network used by the mobile telephone (for example the GSM system), and which moreover may comprise other networks to which
25 the mobile telephone network is connected, for example the ordinary fixed telecommunication network.

Alternatively, some parts of the above-mentioned information can be excluded when transferring from the mobile telephone to the operator system, and/or additional information can be added by means of this transfer. In each
30 case, however, at least information concerning the transaction is transferred.

According to the invention, therefore, information concerning the transaction is transferred from the payment terminal to the mobile telephone, and subsequently from the mobile telephone to the operator system. At this point the invention differs significantly from the previously mentioned system
35 from US-5.608.778, and in itself also from the known, traditional payment

terminals, where information concerning the transaction is transferred from a payment terminal to an operator system, a credit centre, a bank or the like. Since the mobile telephone replaces the payment terminal's communication means with the telecommunication network, the payment terminal which is
5 used in the method and the system according to the invention can be provided as an independent unit, which only needs to be able to communicate with an internal system at the sales location, and locally with the mobile telephone via the previously mentioned electrical or optical communication connection.

10 According to the method illustrated in figure 1, the operator system further registers the received information concerning the transaction. The operator system can thereby perform subsequent charging, invoicing or other settlement, with the object of achieving agreement in the final settlement with the customer and with the sales location. This settlement may, for example, be effected by monthly, collective statements of account. If the
15 operator system has a connection or a collaboration with the mobile telephone company, the statements of account may be combined with the ordinary accounts for the use of the mobile telephone.

In the preferred embodiment of the method illustrated in fig. 1, after this registration the operator system will transmit back to the mobile telephone a
20 confirmation that the registration has been accomplished. This confirmation will preferably be further transmitted by the mobile telephone through the electrical, optical/infrared or similar communication connection to the payment terminal.

In one embodiment, moreover, either the payment terminal or the mobile
25 telephone will provide an indication to the customer that the confirmation has been received. This indication may be provided by means of any kind of indicator, for example of a visual or audible type, provided in the payment terminal or on the mobile telephone. For example the indication may be provided via the mobile telephone's ordinary display unit.

30 Figure 2a illustrates an embodiment of a system according to the invention. The system comprises a mobile telephone, a payment terminal and an operator system which are connected to a network which can communicate with the mobile telephone. Between the payment terminal and the mobile telephone there is a communication connection. In the embodiment in fig. 2a

this consists of an electrical, preferably a multicore connection which is composed of a communication port with which the mobile telephone is equipped, and a corresponding communication port in the payment terminal.

5 Figure 2b illustrates an alternative embodiment, which is identical to the embodiment in figure 2a except for the communication connection between the mobile telephone and the payment terminal. In this case it is not designed as an electrical, direct connection, but comprises optical transmitters and receivers, preferably based on infrared light, mounted on both sides of the communication connection.

10 Electrical and infrared communication connection between a mobile telephone and an external unit is well-known per se. Many mobile telephones to-day are equipped with such communication ports as standard equipment, but this is for entirely different purposes than in the present case, viz. to provide a system for performing payment transactions.

15 The invention is described in the above by means of embodiments and for a person skilled in the art it will be clear that equivalents or obvious technical alternatives exist to the embodiments which fall within the scope of the invention, as set forth in the following set of claims.

20 While reference is made to mobile telephones in the description of the embodiments, it should be particularly emphasized that the invention will also work equally well with other mobile or wireless communication units. Similarly, the term mobile telephone network refers to any kind of wireless communication system, both existing and prospective, and systems based on both local base stations and satellite communication.

PATENT CLAIMS

1. A method for performing a payment transaction between a customer, a sales location and a payment operator, where the customer is equipped with a mobile communication unit, where the sales location is equipped with a payment terminal and where the payment operator is equipped with an operator system which is connected to a network which can communicate with the customer's mobile communication unit, which method comprises the following steps:

- a communication connection is established between the mobile communication unit and the payment terminal,
- the payment terminal transfers data comprising information concerning the transaction via the communication connection to the mobile communication unit,

characterized in that

- the mobile communication unit transfers data comprising information concerning the transaction via the network to the operator system. and
- the operator system registers data comprising information concerning the transaction for subsequent charging, invoicing or other settlement.

2. A method according to claim 1,

characterized in that it also comprises the following steps:

- the operator system transfers data comprising a confirmation that the said registration has been accomplished via the network to the mobile communication unit, whereupon the mobile communication unit may provide an indication that data comprising such a confirmation has been received, and
- the mobile communication unit transfers data comprising a confirmation that the said registration has been accomplished via the communication connection to the payment terminal, whereupon the payment terminal may provide an indication that data comprising such a confirmation has been received.

3. A method according to claims 1-2,

characterized in that the mobile communication unit is a mobile telephone, and that the network is a telecommunication network which includes a mobile telephone network.

4. A method according to claims 1-3,
characterized in that the communication connection between the mobile
communication unit and the payment terminal is established by an electrical
connection through a communication port in the mobile communication unit.

5 5. A method according to claims 1-3,
characterized in that the communication connection between the mobile
communication unit and the payment terminal is established by an optical
connection, preferably infrared transfer.

10 6. A method according to claims 1-5,
characterized in that the data which are transferred via the communication
connection from the payment terminal to the mobile communication unit, and
the data which are transferred via the network from the mobile
communication unit to the operator system comprise data identifying the
sales location and data representing the amount which has to be paid.

15 7. A method according to claim 3,
characterized in that the operator system also fetches information concerning
the payment location by means of services in the mobile telephone network.

20 8. A method according to claim 6,
characterized in that the data identifying the sales location are received in
advance by the payment terminal, the data having been broadcast through a
local radio broadcasting system at the sales location.

25 9. A system for performing a payment transaction between a customer, a
sales location and a payment operator, comprising a mobile communication
unit for the customer, a payment terminal for the sales location and an
operator system connected to a network which can communicate with the
mobile communication unit,
characterized by
- a communication connection between the mobile communication unit and
the payment terminal, which comprises an electrical or optical
30 communication port in the communication unit which is adapted to a
corresponding communication port in the payment terminal.

10. A system according to claim 9,
characterized in that the mobile communication unit is a mobile telephone,
and that the network comprises a mobile telephone network.

1/2

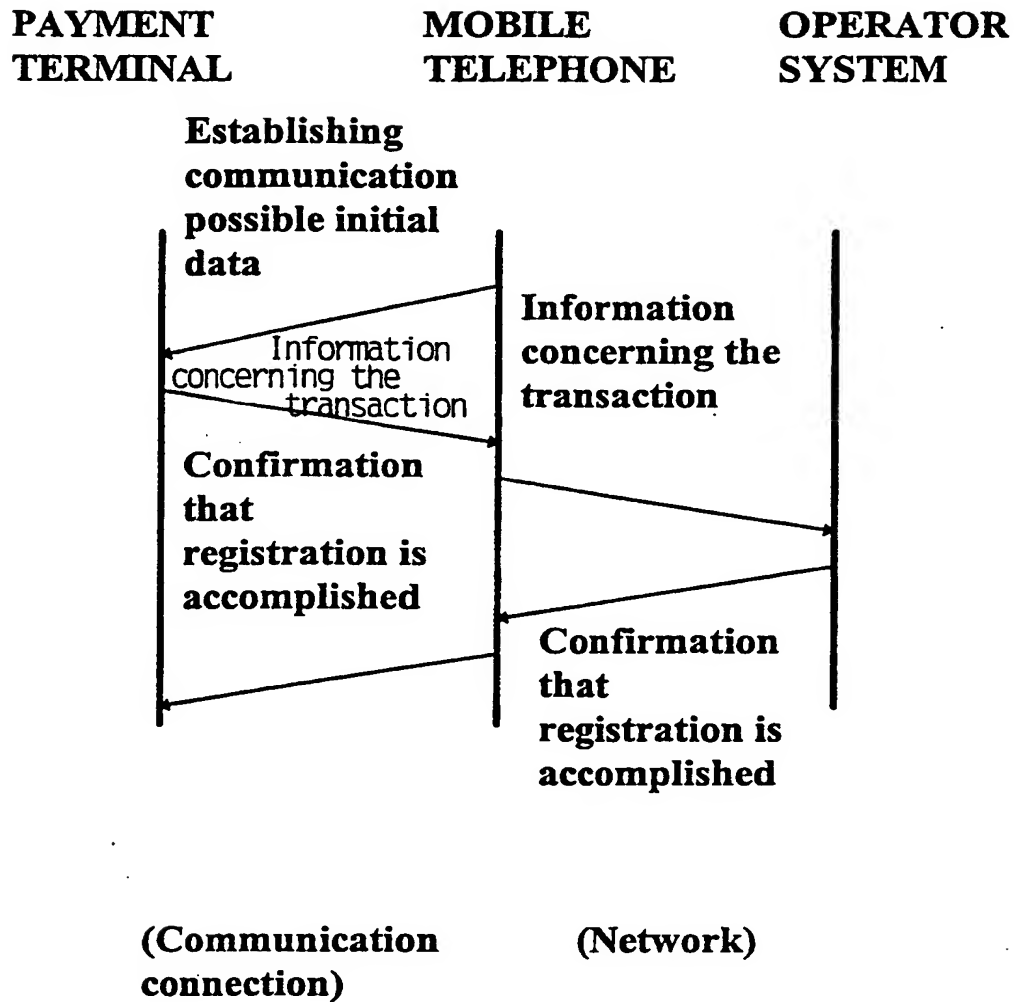


Fig. 1

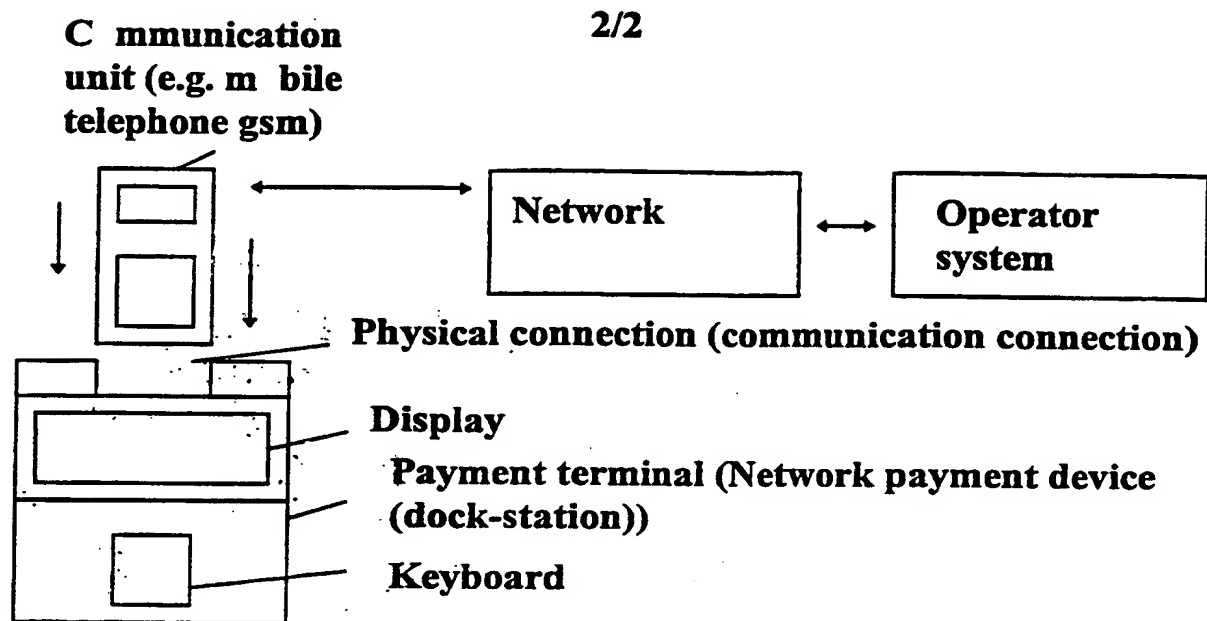
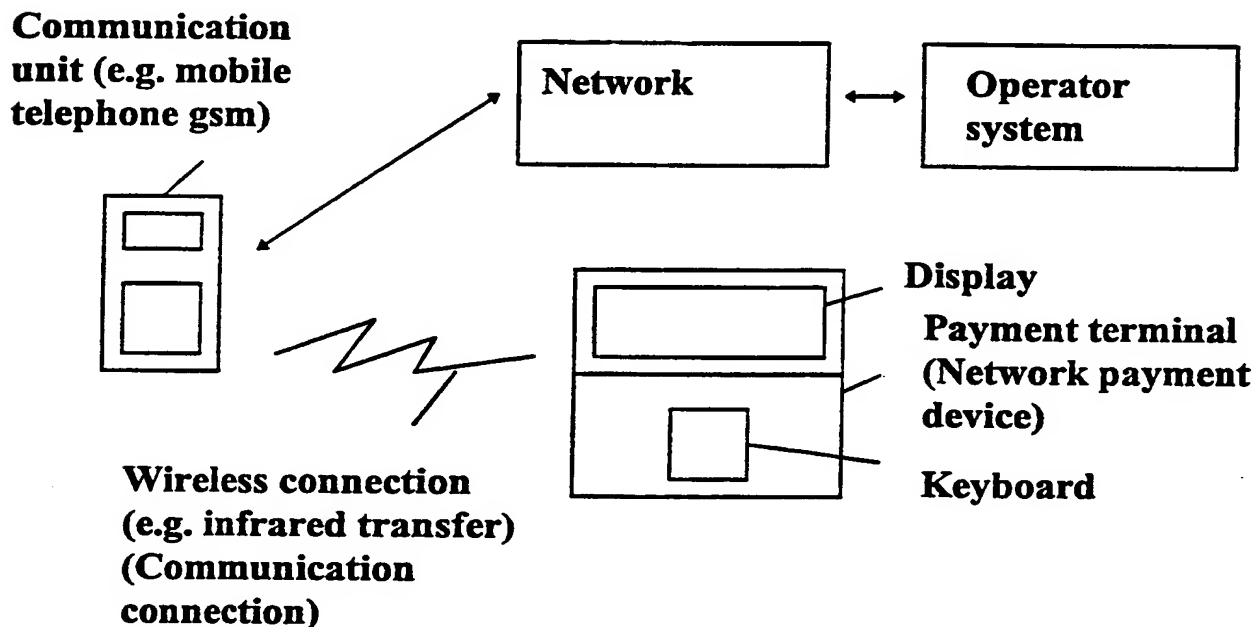


Fig. 2a



INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 00/00230

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G07F 7/08, G07F 7/10 // H04M 15/00 H04Q 7/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G07F, H04M, H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9834203 A1 (QUALCOMM INCORPORATED), 6 August 1998 (06.08.98), figure 5, page 9 last paragraph - page 10 second paragraph --	1,9
X	US 5608778 A (PARTRIDGE, III), 4 March 1997 (04.03.97), fig. 1,2 and adherent text --	1,9
A	WO 9847116 A1 (TELEFONAKTIEBOLAGET LM ERICSSON), 22 October 1998 (22.10.98), whole document -- -----	1-10



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

21 November 2000

Date of mailing of the international search report

23 -11- 2000

Name and mailing address of the ISA/

Swedish Patent Office

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INTERNATIONAL SEARCH REPORT
Information on patent family members

02/11/00

International application No.
PCT/NO 00/00230


Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO	9834203	A1	06/08/98	AU	5963898 A	25/08/98
<hr/>						
US	5608778	A	04/03/97	CA	2156206 A	23/03/96
				EP	0708547 A	24/04/96
				JP	8096043 A	12/04/96
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WO	9847116	A1	22/10/98	AU	7094398 A	11/11/98
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PCT REQUESTOriginal (for **SUBMISSION**) - printed on 04.07.2000 01:01:00 PM

0	For receiving Office use only	
0-1	International Application No.	PCT/NO 00 / 00230
0-2	International Filing Date	2000-07-04 (04.07.2000)
0-3	Name of receiving Office and "PCT International Application"	 PATENTSTYRET Stryket for det industrielle rettssystem ► PCT International application
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.90 (updated 10.05.2000)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	Norwegian Patent Office (RO/NO)
0-7	Applicant's or agent's file reference	112370JPH1he
I	Title of invention	METHOD AND SYSTEM FOR PAYMENT TRANSACTION
II	Applicant	
II-1	This person is:	applicant and inventor
II-2	Applicant for	all designated States
II-4	Name (LAST, First)	HØILI, Jens, Petter
II-5	Address:	Sigrid Undsetsvei nr. 5 N-1619 FREDRIKSTAD Norway
II-6	State of nationality	NO
II-7	State of residence	NO
II-8	Telephone No.	+47 69 31 12 00
IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
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IV-1-5	e-mail	onsagers@onsagers.no
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	VEDDE , Toril; EILERTSEN, H ge; EKEBERG, Tom; VESTLI, Hild ; ROBSAHM, Olav

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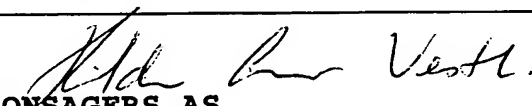
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V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ TZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH&LI CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	05 July 1999 (05.07.1999)
VI-1-2	Number	19993332
VI-1-3	Country	NO
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	International Searching Authority Chosen	Swedish Patent Office (ISA/SE)

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VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	3	-
VIII-2	Description	7	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	112370_sammendrag.txt
VIII-5	Drawings	2	-
VIII-7	TOTAL	15	
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-17	Other (specified):	Search Report	-
VIII-18	Figure of the drawings which should accompany the abstract	1	
VIII-19	Language of filing of the international application	Norwegian	
IX-1	Signature of applicant or agent		
IX-1-1	Name	ONSAGERS AS	
IX-1-2	Name of signatory	Hilde Løver Vestli	

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10-1	Date of actual receipt of the purported international application	2000 -07- 04 (04.07.2000)
10-2	Drawings:	Received
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/SE
10-6	Transmittal of search copy delayed until search fee is paid	

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11-1	Date of receipt of the record copy by the International Bureau	19 JULY 2000	(19.07.00)
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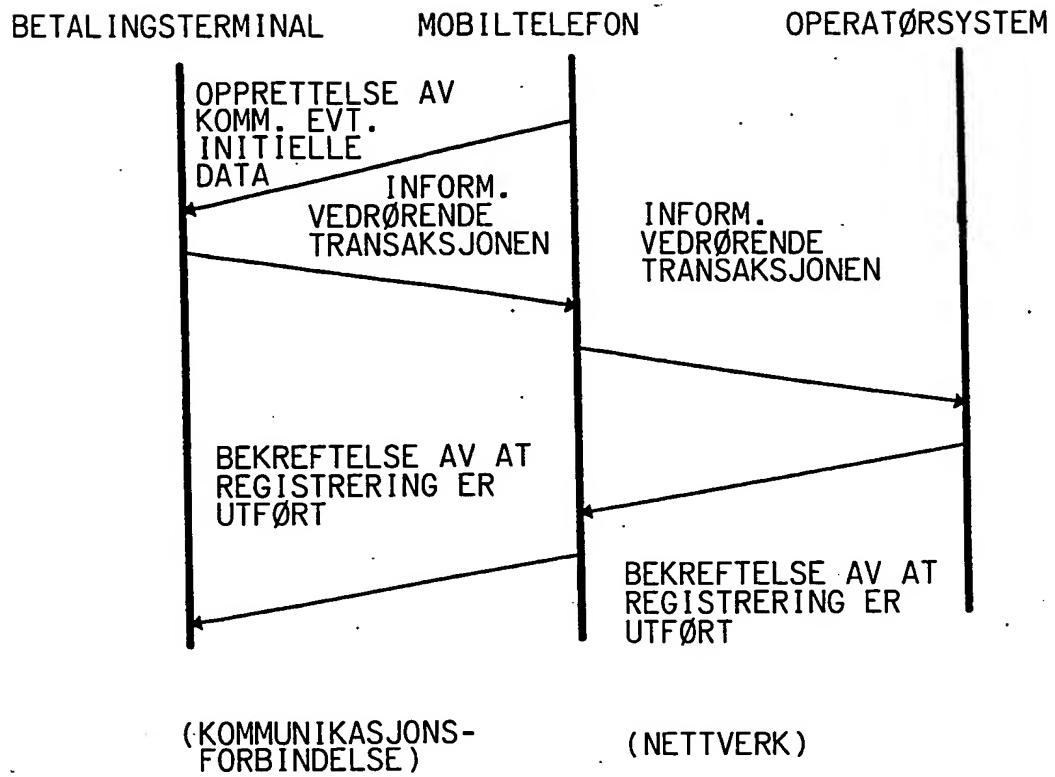


FIG. 1

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KOMMUNIKASJONSENHET
(F.EKS. MOBILTELEFON GSM)

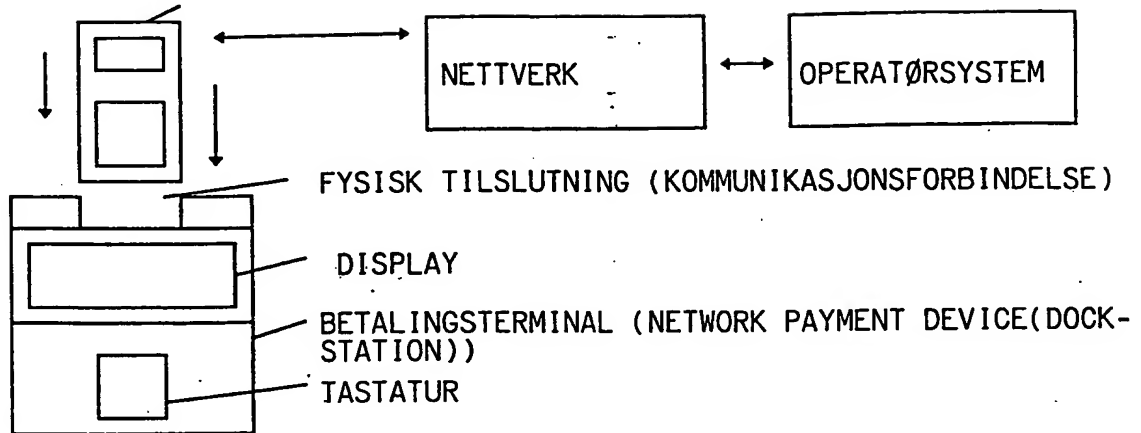


FIG. 2A

KOMMUNIKASJONSENHET
(F.EKS. MOBILTELEFON GSM)

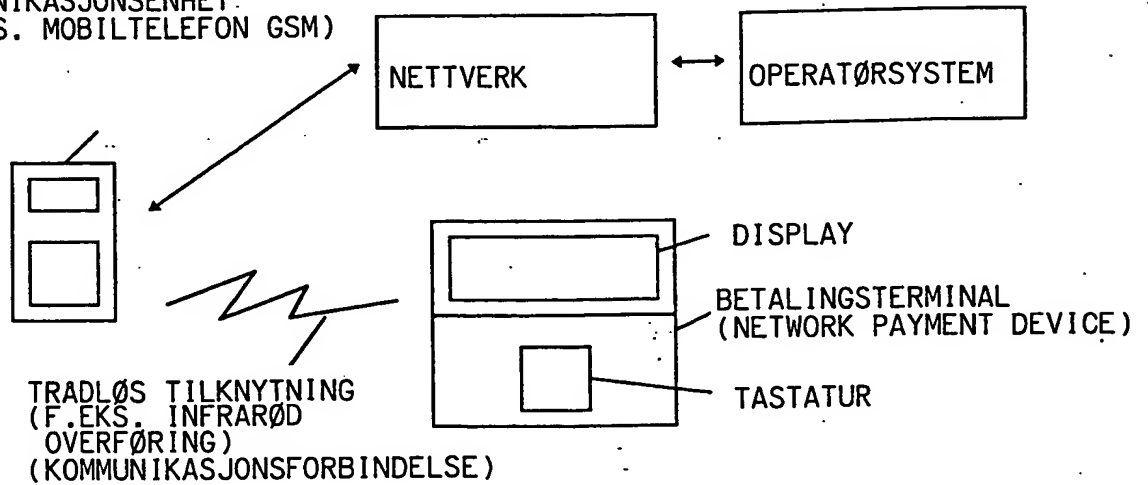


FIG. 2B

Fremgangsmåte og system for betalingstransaksjon

Foreliggende oppfinnelse angår en fremgangsmåte og et system for gjennomføring av en betalingstransaksjon mellom en kunde, et utsalgssted og en betalingsoperatør.

- 5 På handels- eller utsalgssteder, både offentlige og private, herunder butikker, restauranter, hoteller og andre tjenesteytende næringer m.m., er vanligvis betalingstransaksjonene basert enten på tradisjonell, kontant betaling, eller på bruk av betalingsautomater for betalingskort. Disse veletablerte fremgangs-
- 10 måtene for gjennomføring av betalingstransaksjoner krever at kunden enten er i besittelse av kontanter i form av sedler eller mynter, eller at han/hun har et betalingskort i form av magnet- eller smartkort.

- Kontanter et betalingsmiddel som på sikt ser ut til å få mindre utbredelse på grunn av store kostnader. Disse kostnadene skyldes blant annet betydelige maskinelle rutiner ved utstedelse av nye mynter og sedler, samt ressurs-
- 15 krevende og til dels risikofylte rutiner for håndtering, innsamling, transport og lagring av kontante penger.

- Bruk av betalingsterminaler eller -automater med magnetkort/smartkort er pr. i dag svært utbredt, og dessuten ansett som en rasjonell betalingsrutine. Den er imidlertid beheftet med ulemper som kostnadskrevende produksjon og
- 20 distribusjon av kort. Et kort fornyes vanligvis etter to år p.g.a. slitasje. Betalingsterminalene har en funksjonalitet som gjør at slitasje gjør seg gjeldende. «Lesehodet» som leser magnetkortet er her utsatt.

- Det er relativt kostbart for et handelssted å benytte betalingsterminaler. For det første har betalingsterminalene en relativ dyr produksjonskostnad.
- 25 Dernest er slike terminaler tilknyttet et tele- eller datanett for overføring av data, noe som påfører ytterligere kostnader. Banker og kortselskaper tar seg dessuten godt betalt for sine tjenester, noe som i seg selv gjør at prisen blir høyere for en forbruker. I dag kan bankene bestemme fullt og helt både prisen på hva et handelssted må betale for å være i besittelse av en
- 30 betalingsterminal, og forbrukers gebyrer på bruk av betalingskortet i automaten.

Det er også tidligere gjort forsøk på å tilveiebringe nye former for gjennomføring av betalingstransaksjoner, som har som formål blant annet å avhjelpe de problemene som er nevnt over.

- 5 En tidligere kjent løsning som tar sikte på å tilby en kunde å gjennomføre vare- eller tjenestekjøp ved bruk av en mobiltelefon, fremgår av US patent 5.608.778. Denne publikasjonen beskriver et system hvor kunden ved hjelp av mobiltelefonen kan oppnå kreditt ved kjøp på et utsalgssted. Kundens mobiltelefon er trådløst tilknyttet en basestasjon. Basestasjonen kan også kommunisere med et kredittsenter, og kredittsenteret kan videre
- 10 kommunisere med terminalutstyr på utsalgsstedet. Publikasjonen beskriver også ulike kommunikasjonsprotokoller for gjennomføring av en transaksjon der kunden oppnår kreditt fra kredittsenteret ved kjøp av varer eller tjenester på utsalgsstedet. I publikasjonens fig. 4 er det vist en slik protokoll, der en del av fremgangsmåten for transaksjonen består i følgende trinn:
- 15 - mobiltelefonen overfører data til terminalutstyret på utsalgsstedet, hvilke data omfatter identifikasjon for mobiltelefonen, et transaksjonspassord og en autorisasjon, hvoretter
- terminalutstyret overfører data til kredittsenteret, hvoretter
- kredittsenteret overfører en bekreftelse til terminalutstyret, og endelig
- 20 - terminalutstyret overfører bekreftelsen til mobiltelefonen.

Overføringen av data fra mobiltelefonen til terminalutstyret er angitt å foregå ved hjelp av mobiltelefonens radiooverføring, idet terminalutstyret er tilknyttet en mottaker med lav følsomhet, som kan motta radiosignaler fra mobiltelefonen.

- 25 Denne kjente protokollen muliggjør vare- eller tjenestekjøp på utsalgsstedet, der det senere gjøres opp mellom kunden og kredittsenteret. Kredittsenteret kan for eksempel være et selskap med tilknytning til mobiltelefonselskapet, slik at oppgjøret for varene eller tjenestene kan foregå over samme regning som regningen for øvrig bruk av mobiltelefonen.
- 30 Fremgangsmåten og systemet vist i publikasjonen har imidlertid også visse svakheter, som foreliggende oppfinnelse har til hensikt å utbedre.

En første svakhet er at terminalutstyret på utsalgsstedet må være kommunikasjonsmessig tilknyttet kredittsenteret, for eksempel ved at det er tilkoblet et telefon- eller mobiltelefonnett.

5 En andre svakhet ved det kjente systemet er at den lokale, lavfølsomme radiomottakeren kan ha en tendens til å forstyrres av andre mobiltelefoner eller øvrige kommunikasjonsinnretninger, og det er derfor et behov for å tilveiebringe en sikrere og mer pålitelig kommunikasjon mellom mobiltelefonen og terminalutstyret.

10 En første hensikt med den foreliggende oppfinnelsen er å tilveiebringe en fremgangsmåte for gjennomføring av en betalingstransaksjon som nevnt innledningsvis, og som ikke er beheftet med de ovenstående ulempene. Denne hensikten oppnås ved hjelp av en fremgangsmåte som angitt i den innledende delen av det etterfølgende krav 1, kjennetegnet ved trekkene som er angitt i den karakteriserende delen av kravet.

15 En andre hensikt med oppfinnelsen er å tilveiebringe et system for gjennomføring av en betalingstransaksjon som nevnt innledningsvis, og som ikke er beheftet med de ovenstående ulempene. Denne hensikten oppnås ved hjelp av et system som angitt i den innledende delen av det etterfølgende krav 9, kjennetegnet ved trekkene som er angitt i den karakteriserende delen
20 av kravet.

Ytterligere fordeler oppnås ved hjelp av trekkene i de uselvstendige krav.

Oppfinnelsen skal i det følgende beskrives nærmere med henvisning til tegningene, der

fig. 1 illustrerer en fremgangsmåte i samsvar med oppfinnelsen, og

25 fig. 2a og 2b illustrerer et system i samsvar med oppfinnelsen.

Figur 1 viser hvilke trinn som inngår i en utførelsesform av en fremgangsmåte i samsvar med oppfinnelsen.

30 En mobil kommunikasjonsenhet, som fortrinnsvis er kundens mobiltelefon, oppretter først en kommunikasjon med en spesiell betalingsterminal hos utsalgsstedet. Denne betalingsterminalen er i motsetning til tradisjonelle betalingsterminaler ikke nødvendigvis utstyrt med midler for kommunikasjon over telenettet, men den er i stedet innrettet for lokal kommunikasjon med

mobiltelefonen, som så besørger den videre kommunikasjonen til omverdenen.

Kommunikasjonen mellom mobiltelefonen og betalingsterminalen foregår fortrinnsvis ved å anbringe mobiltelefonen i fysisk, elektrisk forbindelse med
5 betalingsterminalen. Til dette formålet benyttes helst mobiltelefonens innebygde kommunikasjonsport. En alternativ løsning er å benytte trådløs, men ikke radiobasert overføring, som for eksempel optisk overføring, spesielt infrarød overføring (IrDa). En rekke mobiltelefoner er idag utstyrt med midler for slik infrarød kommunikasjon. Et ytterligere alternativ som
10 fortsatt ligger innenfor oppfinnelsens rammer, men som dersom den benyttes, opprettholder den andre av de ulempene ved den kjente teknikk som er nevnt ovenfor, er å benytte radiobasert kommunikasjon, på samme måte som i den ovennevnte publikasjonen, idet en radiomottaker er anordnet i betalingsterminalen. Slik radiobasert kommunikasjon mellom
15 mobiltelefonen og betalingsterminalen kan eventuelt benytte andre radiofrekvenser enn den ordinære kommunikasjonsfrekvensen for mobiltelefonen, og eksempelvis være basert på teknologi i samsvar med Bluetooth-spesifikasjonen.

I forbindelse med opprettingen av kommunikasjonsforbindelse mellom
20 mobiltelefonen og betalingsterminalen, kan det overføres initielle data fra mobiltelefonen, som for eksempel kan omfatte informasjon som er tastet inn på mobiltelefonens tastatur. Dette kan omfatte en identifikasjon eller autentisering av kunden og/eller av utsalgsstedet.

Etter opprettingen av kommunikasjonsforbindelsen, kan betalingsterminalen, dersom den er utstyrt med fremvisningsmidler, fremvise de data eller deler av
25 de data som er overført fra mobiltelefonen, eventuelt sammen med informasjon som er inneholdt i betalingsterminalen vedrørende transaksjonen, for eksempel beløpet som skal betales.

Når kommunikasjonsforbindelsen mellom mobiltelefonen og
30 betalingsterminalen er opprettet, overfører betalingsterminalen informasjon vedrørende transaksjonen via den opprettede kommunikasjonsforbindelsen, til mobiltelefonen. Denne informasjonen vil fortrinnsvis i det minste omfatte beløpet som transaksjonen skal omfatte, eventuelt annen informasjon om hva transaksjonen gjelder, som antall og typer av varer og tjenester, og videre en

identifikasjon av utsalgsstedet. Informasjonen kan dessuten omfatte en identifikasjon av mobiltelefonen, informasjon vedrørende dens abonnement, et tilknyttet telefonnummer eller mobiltelefonens eier. Den overførte identifikasjonen av utsalgsstedet kan finnes lagret i lagringsmidler i

5 betalingsterminalen, men den kan alternativt leses inn på et tastatur eller annen innlesningsenhet på mobiltelefonen eller på betalingsterminalen. Et ytterligere alternativ er å la identifikasjonen av utsalgsstedet være kringkastet, eksempelvis med en radiosender anbrakt lokalt på eller i nærheten av utsalgsstedet, slik at den kan mottas av mottakerutstyr i

10 betalingsterminalen og deretter overføres til mobiltelefonen. Sistnevnte alternativ er særlig aktuelt dersom betalingsterminalen er av en mobil type, som derved kan forflyttes fra et utsalgssted til et annet og benyttes der uten noen omprogrammering eller liknende modifikasjon.

Denne informasjonen overføres deretter videre til et operatørsystem. Denne

15 kommunikasjonen foregår gjennom et nettverk som omfatter det ordinære mobiltelefonnett som mobiltelefonen bruker (eksempelvis GSM-systemet), og som dessuten kan omfatte andre nettverk som mobiltelefonnett er tilknyttet, for eksempel det ordinære fasttelenettet.

Alternativt kan enkelte deler av den ovennevnte informasjonen utelukkes ved

20 overføring fra mobiltelefonen til operatørsystemet, og/eller det kan tillegges ytterligere informasjon ved denne overføringen. I ethvert tilfelle overføres det imidlertid minst informasjon som vedrører transaksjonen.

Ifølge oppfinnelsen overføres altså informasjon vedrørende transaksjonen fra betalingsterminalen til mobiltelefonen, og deretter fra mobiltelefonen til

25 operatørsystemet. På dette punktet skiller oppfinnelsen seg vesentlig fra det tidligere omtalte systemet fra US-5.608.778, og for såvidt også fra de kjente, tradisjonelle betalingsterminaler, hvor informasjon vedrørende transaksjonen overføres fra en betalingsterminal til et operatørsystem, et kredittsenter, en bank eller liknende. Ved at mobiltelefonen erstatter betalingsterminalens

30 kommunikasjonsmidler mot telenettet, kan betalingsterminalen som brukes i fremgangsmåten og systemet i henhold til oppfinnelsen fremstå som en uavhengig enhet, som bare behøver å kunne kommunisere med et eventuelt internt system ved utsalgsstedet, og lokalt med mobiltelefonen, via den tidligere omtalte elektriske eller optiske kommunikasjonsforbindelsen.

Ifølge fremgangsmåten vist i figur 1 registrerer operatørsystemet videre den mottatte informasjon som vedrører transaksjonen. Derved kan operatørsystemet besørge senere belastning, fakturering eller annet oppgjør, med det formål å oppnå overensstemmelse i det endelige oppgjøret med kunden og med utsalgsstedet. Slikt oppgjør kan for eksempel foregå ved månedlige, samlede avregninger. Dersom operatørsystemet har en tilknytning til eller et samarbeid med mobiltelefonselskapet, kan avregningene kombineres med de ordinære regningene for bruk av mobiltelefonen.

I den foretrukkede utførelsen av fremgangsmåten vist i fig. 1, vil operatørsystemet etter denne registreringen overføre tilbake til mobiltelefonen en bekreftelse på at registreringen er gjennomført. Denne bekreftelsen vil mobiltelefonen fortrinnsvis overføre videre gjennom den elektriske, optiske/infrarøde eller liknende kommunikasjonsforbindelsen til betalingsterminalen.

I en utførelsesform vil dessuten enten betalingsterminalen eller mobiltelefonen gi indikasjon til kunden om at bekreftelsen er mottatt. Slik indikasjon kan gis ved hjelp av en hvilken som helst indikator av for eksempel visuell eller hørbar type, anordnet i betalingsterminalen eller på mobiltelefonen. Eksempelvis kan indikasjonen gis via mobiltelefonens ordinære displayenhet.

Figur 2a viser en utførelsesform av et system i samsvar med oppfinnelsen. Systemet omfatter en mobiltelefon, en betalingsterminal og et operatørsystem som er tilknyttet et nettverk som kan kommunisere med mobiltelefonen. Mellom betalingsterminalen og mobiltelefonen er det en kommunikasjonsforbindelse. I utførelsen i fig. 2a består denne av en elektrisk, fortrinnsvis flerleders forbindelse som utgjøres av en kommunikasjonsport som mobiltelefonen er utstyrt med, og en korresponderende kommunikasjonsport i betalingsterminalen.

Figur 2b viser en alternativ utførelsesform, som er identisk med utførelsen i figur 2a med unntak av kommunikasjonsforbindelsen mellom mobiltelefonen og betalingsterminalen. Den er her ikke utført som en elektrisk, direkte tilkobling, men omfatter optiske sendere og mottakere, fortrinnsvis basert på infrarødt lys, anbrakt på begge sider av kommunikasjonsforbindelsen.

Elektrisk og infrarød kommunikasjonsforbindelse mellom en mobiltelefon og en ytre enhet er i og for seg velkjent. Mange mobiltelefoner er idag utstyrt med slike kommunikasjonsporter som standardutstyr, men da for helt andre formål enn det foreliggende, nemlig å tilveiebringe et system for gjennomføring av betalingstransaksjoner.

Oppfinnelsen er i det ovenstående beskrevet ved hjelp av utførelsesformer, og for en fagmann vil det være klart at det finnes ekvivalenter eller åpenbare fagmessige alternativer til utførelsesformene som faller innenfor oppfinnelsens rammer, slik den fremgår av det etterfølgende kravsett.

- 10 Mens det i beskrivelsen av utførelsesformene er henvist til mobiltelefoner, skal det særlig understrekes at oppfinnelsen også vil fungere like godt med andre mobile eller trådløse kommunikasjonsenheter. Med begrepet mobiltelefonnett siktes det likeledes til et hvilket som helst trådløst kommunikasjonssystem, både eksisterende og fremtidige, og både systemer basert på lokale basestasjoner og på satellittkommunikasjon.

PATENTKRAV

1. Fremgangsmåte for gjennomføring av en betalingstransaksjon mellom en kunde, et utsalgssted og en betalingsoperatør, hvor kunden er utstyrt med en mobil kommunikasjonsenhet, hvor utsalgsstedet er utstyrt med en
 - 5 betalingsterminal og hvor betalingsoperatøren er utstyrt med et operatørsystem som er tilknyttet et nettverk som kan kommunisere med kundens mobile kommunikasjonsenhet, hvilken fremgangsmåte omfatter
 - at det opprettes en kommunikasjonsforbindelse mellom den mobile kommunikasjonsenheten og betalingsterminalen,
 - 10 - at betalingsterminalen via kommunikasjonsforbindelsen overfører data som omfatter informasjon vedrørende transaksjonen til den mobile kommunikasjonsenheten,
 - k a r a k t e r i s e r t v e d
 - at den mobile kommunikasjonsenheten via nettverket overfører data som
 - 15 omfatter informasjon vedrørende transaksjonen til operatørsystemet, og
 - at operatørsystemet registrerer data som omfatter informasjon vedrørende transaksjonen for senere belastning, fakturering eller annet oppgjør.
2. Fremgangsmåte i samsvar med krav 1,
 - k a r a k t e r i s e r t v e d at den i tillegg omfatter
 - 20 - at operatørsystemet via nettverket overfører data som omfatter en bekreftelse av at nevnte registrering er utført, til den mobile kommunikasjonsenheten, hvorpå den mobile kommunikasjonsenheten eventuelt gir en indikasjon om at data som omfatter en slik bekreftelse er mottatt, og
 - at den mobile kommunikasjonsenheten via kommunikasjonsforbindelsen
 - 25 overfører data som omfatter en bekreftelse av at nevnte registrering er utført, til betalingsterminalen, hvorpå betalingsterminalen eventuelt gir en indikasjon om at data som omfatter en slik bekreftelse er mottatt.
3. Fremgangsmåte i samsvar med krav 1-2,
 - k a r a k t e r i s e r t v e d at den mobile kommunikasjonsenheten er en
 - 30 mobiltelefon, og at nettverket er et telenett som omfatter et mobiltelefonnett.
4. Fremgangsmåte i samsvar med krav 1-3,
 - k a r a k t e r i s e r t v e d at kommunikasjonsforbindelsen mellom den mobile kommunikasjonsenheten og betalingsterminalen opprettes ved en

elektrisk tilknytning gjennom en kommunikasjonsport i den mobile kommunikasjonsenheten.

5. Fremgangsmåte i samsvar med krav 1-3,
k a r a k t e r i s e r t v e d at kommunikasjonsforbindelsen mellom den
5 mobile kommunikasjonsenheten og betalingsterminalen opprettes ved en
optisk forbindelse, fortrinnsvis infrarød overføring.
6. Fremgangsmåte i samsvar med krav 1-5,
k a r a k t e r i s e r t v e d at de data som overføres via
kommunikasjonsforbindelsen fra betalingsterminalen til den mobile
10 kommunikasjonsenheten, og de data som overføres via nettverket fra den
mobile kommunikasjonsenheten til operatørsystemet, omfatter data som
identifiserer utsalgsstedet og data som representerer beløpet som skal betales.
7. Fremgangsmåte i samsvar med krav 3,
k a r a k t e r i s e r t v e d at operatørsystemet i tillegg innhenter
15 informasjon vedrørende betalingsstedet ved hjelp av tjenester i
mobiltelefonnettet.
8. Fremgangsmåte i samsvar med krav 6,
k a r a k t e r i s e r t v e d at de data som identifiserer utsalgsstedet, på
forhånd er mottatt av betalingsterminalen ved at de er blitt kringkastet
20 gjennom et lokalt radiokringkastingssystem på utsalgsstedet.
9. System for gjennomføring av en betalingstransaksjon mellom en kunde,
et utsalgssted og en betalingsoperatør, omfattende en mobil
kommunikasjonsenhet for kunden, en betalingsterminal for utsalgsstedet og et
operatørsystem tilknyttet et nettverk som kan kommunisere med den mobile
25 kommunikasjonsenheten,
k a r a k t e r i s e r t v e d
- en kommunikasjonsforbindelse mellom den mobile kommunikasjonsenheten
og betalingsterminalen som omfatter en elektrisk eller optisk
kommunikasjonsport i kommunikasjonsenheten som er tilpasset en
30 korresponderende kommunikasjonsport i betalingsterminalen.
10. System i samsvar med krav 9,
k a r a k t e r i s e r t v e d at den mobile kommunikasjonsenheten er en
mobiltelefon, og at nettverket omfatter et mobiltelefonnett.

SAMMENDRAG

Oppfinnelsen vedrører en fremgangsmåte og et system for gjennomføring av en betalingstransaksjon mellom en kundes mobiltelefon, et utsalgssteds
5 betalingsterminal og en betalingsoperatørs operatørsystem. Transaksjonen initieres av mobiltelefonen. Data vedrørende transaksjonen overføres så fra betalingsterminalen over en elektrisk eller optisk kommunikasjonsport til mobiltelefonen,
10 og fra mobiltelefonen over et nettverk til operatørsystemet. Operatørsystemet registrerer data vedrørende transaksjonen for senere belastning, fakturering eller annet oppgjør. Videre overføres en bekreftelse på denne registreringen tilbake til
15 mobiltelefonen og videre gjennom den elektriske eller optiske kommunikasjonsporten til betalingsterminalen. Transaksjonen avsluttes ved at det avgis en indikasjon på at den er utført og registrert.

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Fig. 1.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 112370 JPH1/sko	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NO00/00230	International filing date (day/month/year) 04/07/2000	Priority date (day/month/year) 05/07/1999
International Patent Classification (IPC) or national classification and IPC G07F7/08		
Applicant HOILI, Jens Petter		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02/02/2001	Date of completion of this report 26.09.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer van der Haegen, D Telephone No. +49 89 2399 2683 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NO00/00230

3. Article 33(4) PCT

Claims 1-8 are susceptible of industrial application.

Re Item VII

Certain defects in the international application

1. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
2. Contrary to the requirements of Rule 11.11(a) PCT, the drawings contain text matter.

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NO00/00230

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1,3-7	as originally filed		
2,2a	as received on	13/09/2001	with letter of 10/09/2001

Claims, No.:

1-8	as received on	13/09/2001	with letter of 10/09/2001
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Drawings, sheets:

1/2,2/2	as originally filed
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2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NO00/00230

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-8
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-8
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-8
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

R Item V

Reasoned statement under Article 35(2) PCT with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Article 33(2) PCT

1.1 Reference is made to the following documents:

D1: WO 98/34203 (QUALCOMM INCORPORATED) 6 August 1998 and
D2: US-A-5 608 778 (PARTRIDGE III) 4 March 1994.

1.2 Document D2, which is considered to represent the most relevant state of the art, discloses (see eg. Figures 1 and 2) a method and a system for performing a payment transaction between a customer equipped with a cellular telephone 10, a merchant equipped with a payment terminal 30 and a credit centre 40 equipped with an operator system which is connected to a network via base stations 20 and 50. The disclosed method comprises the steps of (see eg. column 5, lines 1-38):

- [verbally] providing a merchant ID code to the customer (see eg. step 18),
- [manually] entering the merchant's ID code and transaction data into the cellular telephone 10,
- transmitting the entered data via a base station 20 to the credit centre 40 (see eg. steps 14 and 17),
- registering the transaction data at the credit centre 40 and,
- sending an approval to the merchant's payment terminal 30 and to the cellular telephone 10.

1.3 The present application differs from document D2 in that :

- a physical or electrical communication connection for transferring transaction data is established between a mobile communication unit and a payment terminal and
- data identifying the sales location are received in advance by the payment terminal, the data having been broadcast through a local radio broadcasting

system at the sales location.

- 1.4 Hence, the subject-matter of independent claims 1 and 7 is new. Claims 2-6 and 8 are dependent on claim 1 resp. 7 and as such also meet the requirements of the PCT with respect to novelty.

2. Article 33(3) PCT

- 2.1 The problem to be solved by the subject-matter of independent claims 1 and 7 may be regarded as to provide a more efficient method and system for effecting a payment transaction.
- 2.2 Document D1 discloses a method and a system for performing a payment transaction between a customer, a merchant and a financial transaction clearinghouse. Data between a customer's mobile unit and a merchant's cashier unit is exchanged by radio or infrared signals (see eg. D1, page 6, lines 17-20).

However, D1 nor D2 disclose the broadcasting of a sales location identification from a local broadcasting system to a payment terminal. Document D2 merely indicates that the merchant's payment terminal is equipped with a low-sensitivity receiver for receiving the ESN and MIN1 of a mobile phone being in the proximity of the merchant's payment terminal (see eg. column 6, lines 15-22), and that the merchant's identification code is supplied electronically to a credit centre (see eg. column 5, lines 48-52). Document D1 merely stipulates that a merchant enters purchase transaction information including a purchase amount and a customer's mobile telephone number into a cashier register, and that said register generates a transaction ID and transmits transaction information and the customer's mobile phone number to a financial transaction clearinghouse (see eg. the paragraph bridging pages 6-7). D1 is further silent about a merchant's (location) identity.

- 2.3 Hence, the subject-matter of independent claims 1 and 7 involves an inventive step. Claims 2-6 and 8 are dependent on claim 1 resp. 7 and as such also meet the requirements of the PCT with respect to inventive step.